670.5
V.23

Index to Volume XXIII.

A

Air Compressors, Prevention of Explosions in, 368.
Aludur Alloys, Properties of, 475.
Aluminium Alloy Castings, Blowholes, Porosity, and Unsoundness in, 205.
Aluminium Alloys—Rich Copper—the Manufacture of, 63.
Aluminium Castings, 90.
Aluminium and its Alloys, 12, 40, 60.
Aluminium Die-Castings, Notes on, 226.
Aluminium in Motor Car Construction, 538
Aluminium Losses, 187.
Aluminium Solders, 481.
American Foundrymen's Association, 562.
American Foundrymen's Association Research Fund, 319.
Annealing Barrel on End. Moulding, 134.
Annealing Furnace, Oil-Fired, 181.
Annealing Ovens, Charging Apparatus for, 204.
Annealing with Pulverised Coal, 55.
Arc Burn, 210.
Arc-Welding Aluminium, 531.
Automobile Steels, 287.

B

Basic Open-Hearth Practice, Manganese as Desulphuriser in, 468.
Basic Steel, Return of Phosphorus, to, 134.
Bearings for Hot Rolls, 151.
Belgian Iron and Steel Industry, Revival of, 231.
Belgian Metallurgy, 388.
Berkshire Automatic Moulding Machine, 52.
Blowers, 67.
Book Reviews, 81, 129, 147, 196, 219, 242, 320, 399, 514, 562, 581.
"Boreas" Cast-Iron Refuse Briquetting Machine, 20.
Brass Foundry, New American, 219.
Brass Industry in Great Britain, American view of, 363.
Brass Melting, Use of Gas in, 436.
Brass, Some Properties of, 60:40, Part II., 265.
British Cast Iron Research Association, 421, 467, 505, 545.
British Industries Fair, 179, 189, 194.
Burrowlite, 474.
Buying Castings, 103, 129, 146

C

Cadmium, Uses of Metallic, 227.
Calcium Silicide, 98.
Calorising, 320.
Canadian Foundry Extension, 581.
Care of Crucibles, 79.
Carnegie Steel Company Works Schools, 151.
Case Hardening, Some Notes on, 576
Cast Iron, 379, 409, 452.
Cast Iron for Locomotive Cylinders, 87.
Casting Multiple Grate Bars, 486.
Casting of Metals, 434, 458, 476.
Catalogues Received, 31.
Centrifugally Cast-Iron Pipe, 98
Centrifugally Cast Steel, Tests of, 561.
Charging Apparatus for Annealing Ovens, 204.
Chrome-Molybdenum Steel Castings, Heat Treated, 488.
Chrome Steel and its Uses, 11.
Clays for American Graphite Crucibles, 388
Cleaning and Dressing Castings, 243.
Climax Cupola, 457.
Company News, 96, 120, 144, 164, 189, 216, 236, 258, 281, 304, 328, 350, 373, 393, 415, 442, 462, 470, 503, 524, 546, 564, 584.
Composite Process of Carburisation of Steel during Casting, 220
Compressed Air in the Foundry, 552.
Concrete Foundry Floors, 19.
Concrete Pipes, 179.
Continental Foundry, Visit to, 357.
Core Binders, 551.
Core-Drying Stove, New Type of, 550
Core Making in France, 128.
Core Making, Modern, 107.
Core-Making Machine, A new, 565.
Core Sands, 371.
Correspondence:
"Castings Trouble," 50, 75, 122, 196.
Concrete Pipes, 218.
Deoxidisers and Tensile Strength, 1.
Extremist Fallacies and Misrepresentations, 148
"General Coremaking," 50, 75, 98.
"Melting Phenomenon," 148.
"Motor-Car Cylinders," 528, 539.
"The Question of Apprenticeship," 518, 565.
Corrosion, Protecting Aluminium and its Alloys from, 151.
Crucible Skimming Arrangement, 179
Crucibles, Refractory, 158.
Cupola Design, 568.
Cupola Lighting without Wood, 319.
Cupola Practice, 76.
Cupoline, 287.
Cupric Etching Effects Produced by Phosphorus and Oxygen in Iron, 430.

D

Design and Equipment of an Iron Foundry, 555, 573.
Design for a Large Jobbing Foundry, 396.
Designing a Small Foundry, 490.
Design of a Foundry for Non-Ferrous Castings, 444.
Design of Foundries, 272.
Design of an Iron Foundry, 354.
Dilatation Determinations in Steel, 218.
Drawing Patterns, 249.

E

Efficiency Exhibition, 148.
Efficiency in Management, 408.
"Electrically Conductive Hearth Construction," 4.
Electrically-Controlled Mould Dryer, 128
Electrical Resistance Furnaces, 101.
Electric Core Oven, 151.
Electric Furnaces and the Sulphur Problem in Cast Iron, 92.
Electric Furnace Design, the Question of, 570.
Electric Furnace, Small High-Temperature, 59.
Electric Furnaces for Heat-Treating, 131.
Electric Furnaces in the Iron Foundry, 221.
Electric Furnaces, Iron-Castings in, 554.
Electric Furnaces, Large, 315.
Electric Ingot-Stripping Cranes, 210.
Electric Iron and Steel Furnaces Compared, English and American Types of, 5, 29, 53, 77.
Electric Iron Furnace, 81.
Electric Iron Pipe, Tests on the, 82.
Electric Rivet Heater, 150.
Electrode Electric Furnaces, 535.
Electrometallurgy in Italy, 20.
Engine Castings, Mouldings, in Loam, 81.
Engineering Training Organisation, 30.
Erosion of Bronze Propellers, 277.
Etching Reagent, New, for Iron and Steel, 30.
Eyre System of Oil-Burning, 436.

F

Failure of the London Castings, 19.
Failure of Metals, 332, 355, 385.
Falkirk Foundry Technical Institute, 362.
Ferro-Manganese in the Electric Furnace, Manufacture of, 65.
Fire Bars, 489.
Fish Scaling, 474.
Foundry Conditions in Sweden, 537.
Foundry Courses by Correspondence, 139.
Foundry, Electrically Operated, 273.
Foundry Exhibition, 562.
Foundrymen's Competition, 331.
Foundry, Modern, for Producing Small Castings, 91.
Freeman Precision Temperature Control, 177.
French Core-Binder, 129.
French Duties, Re-established, 121.
French Foundry School, 187.
French Pipes for Yeovil, 256.
Future of American Electric Furnaces, 81.
Furnace Materials, Properties of, 246.

G

Gas-Engine Castings, 110.
Gas from Straw, 65.
Gas Producer Practice, 446.
Gazette, 144, 164, 216, 236, 258, 281, 304, 328, 350, 373, 393, 415, 442, 462, 470, 503, 524, 546, 564, 572.
German Foundry Trade, 131.
German Steel Foundry Modern, 321.
Good and Bad Patterns, 82.
Grain Size in Carbon Steels, 82.
Graphite in Iron, Solubility of, 486.
Graphite (Madagascar) Industry, 572.
Grindle Pulverised Fuel Plant, 154.
Gun-Metal, Constitution and properties of, 455.

H

Hardness Testing Machine, New, 560.
Health in Brass Foundries, 302.
Hearth Sands, 130.
Heat Treating Cast Iron, 514.

XUM

PUBLIC LIBRARY
DETROIT MICH.

Heat-Treatment Furnaces, Rotating, 241.
High-Speed Steel, Casting, 52.
High Tensile Steel Castings, 178.
Hints for Young Patternmakers, 210.
Historical Note, 249.
Hoist Blocks, Electric, 475.

I

Inauguration of a New Foundry, 147
Inside Diameters, Determination of, 82
Institute of Metals, 204, 240
Impeller Castings, Moulding, 88

INSTITUTION OF BRITISH FOUNDRYMEN

Birmingham Branch.

Annual Dinner, 162.
Annual Meeting, 348.
Experiments in Malleable Iron, 125, 136.
Jolt Ram Machines, 499.
Refractories in Moulding Practice, 108, 113
Relationships between the Drawing Office, Pattern Shop, and Foundry, 56.
What is Semi-Steel? 201, 233.

Coventry Branch.

Annual Meeting, 411.
Carbon in Iron and Steel, 344.
Foundry Refractories (Facing Sands), 256
General Core-Making, 8.
Manufacture of Pattern Plates, 135.
Physical Properties of Cast Iron, 112.
Production of an Oven Roll in Green Sand, 155.
Thermometry and Pyrometry in Industrial Operations, 232.
Types of Foundry Buildings, 170.

East Midlands Branch.

First Annual Dinner, 325.

Lancashire Branch.

Annual Dinner, 86.
Core Sands, Some Experiences with, 479.
Foundryman: His Status in Industrial Life, 183
Foundry Practice and Problems of Non-Ferrous Metals, 278.
Hard Castings in the Machine Shop, 184.
Modern Metallurgical Investigation, 83.
Safety in Foundry Equipment, 450, 473, 519.
Some Experiences of Cupola Practice, 507.

London Branch.

American Foundry Impressions, 36.
Co-operation of Scientific and Industrial Research in the Iron Foundry, 288.
Heat Treatment of Copper Alloys, 291, 345.
Mechanical Tests for Cast Iron, 132, 149.
Pattern Plates, 543.
Steel Castings, Manufacture of, 197, 255

Newcastle Branch.

Annual Dinner, 186.
Centrifugal Castings, Some Notes on, 400.
Mechanical Tests for Cast Iron, 160, 369.
"Open Night," 37.
Surtees Memorial, 480
Welding of Cast Iron, 159.

Scottish Branch.

Electric Furnaces, 326.
Gun-Metal, 2.
Scottish Branch, Microscope: Its Uses and Application in the Foundry, 186
Scottish Branch, Falkirk Section, Moulding Sands and Facings, 211
Sheffield Branch, Annual Dinner, 138
Blow-holes in Castings, 36
Meeting Competition against Castings, 460
Cupola Practice, Modern, 337
Foundry and the Automobile Industry, 381
Quantity Production in American Foundries, 85
Scientific Research to the Foundry, The Value of, 211
Some Properties of 60: 40 Brass—Part I., 253
Steel Castings, Manufacture of, 197, 255

Institution of Production Engineers', 256
Internal-Combustion Engines, Some Castings for, 493
Internal Stresses in Relation to Microstructure, 334
International Exchanges, 207
Investigation of Brass Foundry Fluxes, 511
Iron and Steel, Making of, 250
Iron Castings in the Electric Furnace, 554
Is the Sand-Casting a Necessity? 80
Italian Miners for France, 246

K

Kryn and Lahy Works, Letchworth, 509.

L

Labour-Saving Devices Suggested in a Foundry, 27
Large Ingot Mould, 486
Lead Ores, 302
London Joint City and Midland Bank, Limited, 122
L.P. Cylinder in Loam or Dry Sand, Making a—III., 310, 402, 540
Lumsden Oscillating Surface-Grinder, 109

M

Madagascar Graphite Industry, 572
Magnesium in the Foundry, 134
Magnesium, Metallic, 323
Malleable Castings, Economic Annealing of, 111
Malleable Castings, Influence of Manganese on Strength of, 340
Malleable Castings, Inspection of, 276
Malleable Casting, Large, 559
Malleable Castings, Tests of, 433
Malleable Cast Iron, French, 447
Malleable Cast Iron, Impact Hardness and Wear of American, 532
Malleable Iron Castings, Some Difficulties in the Manufacture of, 227
Malleable Iron, Plastic Deformation of, 431
Malleable Iron, Annealing, 7
Malleable Iron Practice, A Comparison between American and British, 399
Manganese as Desulphuriser in Basic Open-Hearth Practice, 468
Manganese-Bronze Marine Propellers, Manufacture of, 173, 208, 223
Manganese in Ingot Moulds, 31
Marine Engine Cylinders, 103
Markets (Iron and Steel), 22, 45, 70, 93, 117, 141, 166, 190, 214, 237, 260, 282, 306, 330, 352, 374, 394, 416, 439, 464, 483, 504, 522, 548, 566, 583
Melting Phenomenon, 98
Metal-Heating Furnace, 52
Molybdenum Steels, 406
Motor Cylinder Iron from Electric Furnace, 277
Mould-Carrying and Pouring Devices, 343
Moulding Box Speciality, 131
Moulding Double-Compartment Inspection Cases, 526
Moulding Machines, 148
Moulding of a Large Dynamo Casting, 320
Moulding Rudder Castings, 365
Mould Powders for Ornamental Castings, 474

N

National Physical Laboratory, 527.
Nickel Brasses, 255.
Nickel-Plating of Aluminium, 82.
Nitrogen on Case-Hardened Steel, Influence of, 179.
Non-Corrosive Steel, 514.
Non-Ferrous Metals, Melting in Open-Hearth Furnace, 286.
Notes and Comments, 1, 25, 49, 73, 97, 121, 145, 169, 193, 217, 239, 261, 285, 309, 331, 353, 377, 395, 419, 443, 467, 485, 507, 525, 549, 567.

O

Oil Firing in the Cupola, Auxiliary, 457.
Open-Hearth Iron, 571.

P

Pattern Making, Open Frames and Closed Plates for, 182.
Pattern-Maker's Bench Equipment, 471.
Pattern Plates for Floor and Machine, 515.
Pattern Shop, Lay-out of the, 115
Pattern Store, 271, 341, 407.
Permanent Moulds for Cast-Iron Castings, 106.
Piping in Aluminium Ingots, 274.
Platinum Resources of the Empire, 82.
"Pneulec" Moulding Machine, 76.
Prize Winners of the Foundry Competition, 420.
Producers for Drying Stoves in the Foundry, 387.
Production and Efficiency, 16.
Puddling, Economical, 323.
Puddling, Mechanical, 18.

Q

Queries Answered, 315, 346, 378, 478, 529, 581.

R

Reactions in Gas Producers, 302
Recuperative Furnace, New Type of, 32.
Refractory Materials for Furnace Linings, 162.
Refractories for Electric Furnaces, 66.
Repair of Castings, the Rapid and Economic, 364.
Research in the Iron Foundry, Co-operation of Scientific, Part II., 316.
Rich Copper: Aluminium Alloys, or Hardeners, Manufacture of, 63.
Rolls, Failures of German Steel, 335.
Rotary Table Sand Blast Machines, 382.
Ruggles-Coles Rotary Dryers, 383.
Rundle Foundry, Some New Features in the, 175.
Rustless Iron, 248.
Rusty Cast-Iron Scrap, 175.

S

"Safety First" in Steelworks, 180.
Safeguarding of Machinery, 34.
Sand Blasting Castings, 200.
Sand-Mill Pans, the Moulding of, 195.
Scientific Research, Value of, to Iron Founding, 123.
Semi-Steel, American, 172.
Semi-Steel, Cast Iron *v.*, 99.
Setting and Sharpening Saws, 67.
Silica Bricks, 104.
Silicon, Daily Checking of, in Cast Iron, 489
Singalese Plumbago, 267.
Spanish Smelting Works, 324.
Special Elements when Added to Commercial Cast Iron, Influence of, 512, 530.
Spherical Casting with an Inverted Core, Method of Making, 270.
Standardisation in the Testing of Welds, 228.
Stainless Steel, 554.
Steel Castings and the Ironfoundry, 241.
Steel Castings, Moulding Small, 89.
Steel Castings of Intricate Design, 324.
Steel Castings, Processes for the Production of Small, 26.
Steel Castings Selling Chart, 276.
Steel Rolls, Failure of German, 335.
Stellite, 200
Structural Changes in Silica Bricks, 152
Swedish Electric Pig-iron Furnace, 225
Sweeping Elbow Cores, 272.
Sweeping Spiral Drums, 14.
Synthetic Cast Iron, 378.

T

Tempering Sand, 107.
Tensile and Shock Test-pieces, Moulding, 65.
Testing of Steel, 268.
Thermit Welding of Cast Iron, 79.
Thermonite, 328.
Treatment and Uses of Dolomite, 176
Turbine Parts, Moulding of, 74.

U

Unemployment. 319.
Uranium in Steel, 16.

V

Valves for Internal Combustion Engines, 252.

W

"Wadkin" Mechanical Wood Worker, 301.
Welded Straight Piping, Failures of, 80.
Welding of Steel in Relation to the Occurrence of Pipes, Blowholes and Segregation, 423.
Wellman Bibby Coupling, 147.
Wellman Mechanical Gas-Producer, 247.
Wheel Rims, Protecting, 139.
White Metal Pattern Plates, 474.
Wood Grinding Machines, Pattern-Makers', 508
Wood Screws, Some Notes on, 384.
Wood *v.* Iron Patterns, 520.
Works of Steel Castings, Ltd., 262

X

X-Rays and their Industrial Applications, 296.